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The Politics of Health Services Research: Health Professionals as Hired Hands in a Commissioned Research Project in England

Abstract

Previous health services research has failed to account for the role played by clinical staff in the collection of data. In this paper we use the work of Roth on hired hand research to examine the politics of evidence production within health services research. Sociologies of work predict lack of engagement in the research tasks by subordinated groups of workers. We examine the role of midwives in researching ante-natal screening for sickle cell and thalassaemia in England, and construct three ideal types: *repairers*, *refractors*, and *resisters* to account for the variable engagement of health staff with research. We find some features of the hired hand phenomenon predicted by Roth to be in evidence, and suggest that the context of our project is similar to much health services research. We conclude that without concerted attempts (1) to change the social relations of research production; (2) to mitigate hired hand effects; (3) to assess the impact of the hired hand effect on the validity and reliability of findings, and (4) to report on these limitations, that health services research involving large teams of subordinated clinical staff as data collectors will be prone to produce evidence that is of limited trustworthiness.

Keywords: evidence-based research; health services research; hired hands; politics of evidence; screening; midwives; research methodology; work and employment.

The Politics of Health Services Research: Health Professionals as Hired Hands in a Commissioned Research Project in England

Introduction

The production of “evidence-based policy” plays a central role in the governance of health in contemporary societies, but has been criticised for a failure to acknowledge various local contexts, whether of culture, political economies or technologies (Poland *et al.* 2005). Some attention has been accorded to the resistances of health professions to such developments (Traynor 2009), though others have conceptualised health technology as a new form of governance, enrolling health professions and academics, biomedical and social science researchers, and even patient preferences, in uneasy alliances (Faulkner 1997). Health technology has itself expanded to incorporate local contingencies of everyday health care practices (May 2006). What has received less attention is how the mobilization of health staff in research around specific health technologies creates artifacts rather than findings. It is not just that findings minimize “specific features of healthcare landscapes” (May 2006: 516) but that the processes of research are themselves forms of social interaction, constrained and produced by relations of power, that *effect* findings. One major issue in this politics of evidence is the role played by clinical staff, in this case midwives, in collecting data for large randomized controlled trials (RCTs) in health services research.

This phenomenon is densely layered, and, in retrospect, we can identify at least three relevant frames (in addition to the manifest frame of ethnicity that was the topic of the research). One is gender, and the extent to which a male principal investigator may be interpellated to reconstruct hegemonic masculinity (Connell 1995) in a marginalized form specific to the gendered spaces of an ante-natal clinic

(Dolan & Coe 2011). A second is the interface between research and clinical practice: what May (2006) has referred to as the asocial generalizability of pure randomised controlled trials and the locally-embedded practicalities of clinical encounters, in which a midwife, for example, may have to render herself vulnerable in finessing bureaucratic requirements, including data collection for research, in order to practice good midwifery under pressure (Kirkham 1999). A third is the specifically methodological frame we consider in this article: the phenomenon of what Julius Roth called 'hired hands', that is, people collecting data who do not 'own' the research project. We begin by reviewing the original article (Roth 1966). We then describe a project, in which 298 midwives, across four areas of England, collected data. We then report on our attempts to address the concerns about hired hands in data collection. We foreground this frame in our analysis here for the simple reason that it is one we consciously engaged with in conducting the research, though we refer where appropriate to the intersection with the other aforementioned frames.

The 'Hired Hand' Effect

The original article by Roth linked insights revealed by ethnographies of the workplace (Roy 1952), with his own experiences as a data collector employed on large-scale projects. The sociology of work had led to a number of propositions. When workers are positioned at the bottom of occupational hierarchies; when they have no say over the flow and pace of work; when they are given no say in the organisation of work, nor any view of the overall wider picture into which their contribution fits; we should *expect* the following as *normal* behaviour. They will do the minimum work possible to get by. They will not care about the quality of work they produce. They will not use initiative to solve any problems. Work will be undertaken in a desultory manner. Neither quality assurance nor audit will improve work performance

because workers will conspire to produce indicators that meet external inspection standards at the very expense of the actual quality of work produced.

Such an orientation to labour, argued Roth, equally characterises work in hierarchically-organised research teams. Thus hired hands will make up parts of data to fill given quotas and will collaborate to circumvent quality checks. Whyte (1984) refers to the “Swiss cheese effect” in which one data collector returned completed questionnaire schedules, which, when reproduced onto computer punch cards and held up to the light, let daylight through, suggesting the collector had fabricated data through multiple identical responses. However, Roth would regard this as an example of only the cruder forms of cheating, which are more readily uncovered. Moreover, the reduction of the hired hand phenomenon to a matter of technical checks ignores the more radical claim that the hired hand phenomenon is an *intrinsic* negative characteristic of hierarchical research team organization (Hakim 2000: 193-4), to be countered through involving each researcher in formulating research questions, selecting fieldwork strategies and analysing the data (Bogdan & Taylor 1998).

Other authors cite Roth approvingly as suggesting that each researcher should be involved in formulating research questions, selecting fieldwork strategies and analysing the data (Bogdan & Taylor 1998). Delamont (2001) treats hired hands as a term referring to research assistants, and ponders whether the hired hand should have complete control over their field notes. However, this seems closer to the concerns of academic contract researchers (Goode 2006; Tilbury 2007; Mauthner & Edwards 2010), where smaller team size, the possibility that that subordination may at some future point be transcended, and having an academic stake in the research, seem to us to be sufficient reasons for not conflating academic contract researchers with hired hands. In this respect Clinton (1975) usefully distinguishes between hired hands and hired researchers.

Moreover, social science health research is embedded in, and to a degree subordinated to, medical funding. Our involvement was in response to a call for research tenders that (1) required RCT styles of research, (2) offered a pre-set budget, (3) was time-limited to meet a policy-decision deadline, and (4) required us to manage research, whilst not controlling the budget for service developments as part of the research design. Thus we were ourselves what Clinton (1975) terms hired researchers, who in turn needed to hire local lead researchers, and to organize midwives to collect data, effectively imposing the hired hands position onto them. In line with concerns of Mauthner & Edwards (2010) on gendered relations in research teams, we involved the local lead researchers in decisions of research process, fieldwork strategies, data analysis and co-authorship (Dyson *et al.* 2006; Dyson *et al.* 2007). However, in contrast to Oakley (1992) who as a female lead researcher motivated three research midwives to collect data on subject matter consonant with their professional ethos (social support of mothers during pregnancy), and where the hierarchy of the team rested at herself and the research midwives, our research was obliged to involve hundreds of midwives. The terms of the research tender - to collect data through routine practice - precluded any design relying solely on research midwives, and our project was therefore closer to the use of large numbers of clinical staff in medical research, where those collecting the data are embedded in longstanding subordinated positions (Davies 1995).

Considering the implications of the 'hired hand' thesis for health services research, it has received relatively little attention, and the 'hired hand' concept is conspicuous by its absence in the UK Medical Research Council's guidance on complex interventions (Craig *et al.* 2008). However, whilst not explicitly conceptualized within Roth's scheme, some health services research has covered pertinent themes (Salmon *et al.* 2007; Heaven 2010).

For example, co-operation with research may be part of the job description of clinical staff but it is not central to their professional identity. Salmon *et al.* (2007) suggest that participation in RCTs may not be viewed as inherently worthwhile by GPs, who foreground personal experience over evidence-based practice, given the limited relevance of research involvement in the context of their career structures. Likewise, if research is perceived to disturb professional-client rapport (Rapley *et al.* 2006), participation in research may be resisted. For instance, Heaven (2010: 37) reports that primary care nurses resisted their 'research roles' by booking rooms too small for the training, cancelling at short notice, and standing researchers up. Bamford *et al.* (2012: 7) report the resistance of home care staff to an experimental intervention to improve nutritional care, noting that: "A few members of staff actively resisted implementation, either by refusing to make changes, making changes in ways that were likely to be unacceptable to clients, or sabotaging implementation (e.g., by "losing" the modified menus)".

Few authors have attempted to respond to the hired hand effect in practice. Dyson (2000) contrasts hired hands to working alongside community researchers with vested interests in the research topic, drawing out what is lost and what is gained in terms of validity and reliability in the use of participatory community researchers. However, we did not have the licence to select the identity of our data collectors in this instance. To recap: the authors were at once the research directors who created a team of local lead researchers, recruited the services of professional midwives as hired hands, were both involved in collecting and entering data, but were ultimately ourselves hired researchers of the national policy makers. Quinn (2003) illustrates one type of response by hired researchers to this situation: the mortification of the ethnographic self in the face of commissioned research and the consequent loss of reflexivity in the policy report. It is such reflexivity in how data were generated that we sought to maintain in this project.

The Project

The project [EQUANS: Ethnicity Questions and Antenatal Screening for Sickle Cell/Thalassaemia] comprised a randomised controlled trial (RCT) of two candidate ethnicity screening questions to be asked when a pregnant mother first encountered the midwife - the “booking-in interview” - together with qualitative research based on observations of this encounter and short interviews with the mother and midwife. The first author was the principal investigator. The second author was one of six local lead researchers (three midwives, one nurse and two dual qualified) collecting data and, in addition to being dual qualified herself, was the only local lead researcher employed by a university rather than the health services.

All phases of the project were passed by a multi-centre research ethics committee. The four areas of England studied had varying proportions of minority ethnic communities. Across the four localities (Areas 1-4), under the guidance of the six local lead researchers (Researchers A-F, in two of the four areas this responsibility was shared), midwives collected data with 5,211 women for the RCT. Sixty-two of the midwives were then themselves research participants in that 121 of their interactions with mothers were observed, and taped interviews were conducted after the booking-in interview by the observer with the midwife and mother (see Dyson *et al.* 2006; Dyson *et al.* 2007). The research processes reported here are based on midwives’ free-text comments within the questionnaires; notes at workshops where the local researchers conducting the observations travelled to meet the authors on five occasions to analyse the data; notes written by the authors after field encounters (for example to negotiate access or provide interim feedback); and a review of letters and emails pertaining to the project.

Experiencing hired hands

The reaction of the midwives to the project was varied, both within and between areas, but can be broadly characterised in three of what Weber (Gerth and Mills, 1948) would call ideal types. Ideal types are *not* classifications, but heuristic devices, one-sided accentuations of characteristics of a phenomenon, with the aim of increasing conceptual insight. The first style we refer to as *Repairers* where, given the challenges of taking on extra work, midwives re-assembled their work processes into a coherent practice, and collected as much data as possible. The second orientation we have termed *Refractors*. This comprised an outlook where research processes were refracted through existing work practices, pressured situations in which optimal conditions for data collection rarely arose, and thus only some data was collected. And finally, *Resisters*, an orientation that, for various reasons, opposed the research and so resulted in little or no data collected. We derived data on the range of midwives who participated and how many clients they each recruited through the (unplanned) unobtrusive measure (Lee 2000) of the number of times different named midwives signed as witnesses to the client consent sheet, how frequently any one individual midwife did so compared to the total number of women she booked-in, as well as more indicative evidence by virtue of their comments to the researchers.

Table 1:
A Characterisation of Midwifery Styles of Recruitment to the EQUANS Project

Ideal Type	Proportion of Midwives	Clients Booked	Midwife Participation Rate	Clients reported as approached to take part in the research
<i>Repairers</i>	25%	5,000	75%	3,750
<i>Refractors</i>	50%	10,000	12%	1,200
<i>Resisters</i>	25%	5,000	1%	50
Synthetic Estimates		20,000	25%	5,000
Actual Figures		19,546	26.7%	5,211

First, we estimate around a quarter of the midwives participated extensively in the project, even though extra work was required in an already pressurised situation (see Ashcroft *et al.* 2003). However, even

where midwives adopted such a positive framing of the research, such repair work was found to be difficult to accommodate within busy schedules.

I have found it really difficult to give priority to this research in any but very straightforward bookings. This one was easy - a health professional. Your information sheet is admirably explicit, but either too much to read or a real win-up [sic]. All clients booked have been 'thoroughly English' (I know, I can't be sure), but any social psychological problems have to take precedence. [Midwife written comments, Questionnaire #2580]

The appeal to the current- client- in- the-clinic as the most important is also an example of the phenomenon identified by Fox (1991), and suggests that pursuit of autonomy in one's work is a key struggle in the working lives of midwives. However, as we will see in the fieldwork diary extract below any one midwife might move between recruitment and resistance during the study for particular (understandable) reasons.

Secondly, around half of the midwives - refractors - participated in a limited way. This entailed varying their participation based on their own workload (recruiting only when less busy); 'forgetting' (cf Bamford *et al.* 2012: 7) to take a questionnaire to the booking interview; not inviting mothers whom the midwives perceived to be 'overloaded' to participate; recruiting just sufficient to avoid the local lead researcher following them up; recruiting only after several reminders; and reducing their own recruitment when it became clear other midwives were not recruiting at all to the study.

None [of the midwives are] bold enough to say 'I'm not doing it'. One non-completer even said, 'It's OK. No need to come out [name of another midwife]'s told me about it'.
[Researcher B: Researcher Meeting, 28-29 April 2003]

In Area 2 a workshop called to problem-solve to improve recruitment rates, was accompanied by a line-management instruction for all midwives to attend. However, when it transpired one of the midwives had cared for a stillbirth the previous day, appropriate support was extended to a distressed colleague, and eight of the nine midwives remained in the staffroom to comfort her rather than enter the

education room next door. To extend Finch (2007), here was a display to the researchers that midwives had more important issues to deal with, and so participation in the research meetings would be considered inappropriate. In Area 3 the entire midwifery team (bar one midwife, her manager and local researcher E) sat in the staff room and did not come down the corridor to the equivalent workshop. The midwifery managers of Areas 1, 2 and 3 all pointed out to the authors that they could not press the midwives too hard because they feared some would quit the service (cf Curtis *et al.* 2002) and leave the managers even more short-staffed.

Thirdly, we noted many examples of resistance to the research. Not all the resistances are of the same type, nor do we characterise them in a negative fashion, since some relate to competing professional ideologies, gendered social relations and to the politics of resisting managerialism. As Sayer (2005) argues, resisting change is sometimes the progressive course of action.

Examples of resistance included two midwives who were overheard by the authors to discuss the project at the initial training workshops, saying that they would not co-operate and, in order to hide this non-co-operation, claim that the mother had opted not to take part. An entire midwifery team were reported by the local researcher C to be collecting no data towards the project for the first six months of the project.

One of my field researchers has reported twice being told that, to quote, "Midwives at the [Name of Hospital] are very anti the research and many have refused point blank to undertake any"[Letter from Author 1 to Head of Midwifery Services, 7 February, 2003]

One midwife was reported to have thrown away the (still functioning) stopwatch, which all participating midwives had been given, a clear symbolic rejection of the research.

Some resistance arose because not participating fulfilled a dual function of communicating indirectly a frustration at their overall conditions of work, but also avoided compromising their rapport with the woman.

HIV, Downs, smoking seen as more important. Lack of information given by midwife means woman does not have the info to make a choice and is then not recruited. Some midwives refuse EQUANS because EQUANS is 'sacrificeable', a means of saying we are not being listened to. EQUANS as a gift, a way of saying we've had enough. Midwives use woman to justify their choices - not picking up questionnaires, choosing by saying 'I forgot', that woman is under-age. [Researcher D: Researcher Meeting, 3-4 February, 2003]

At the preparatory workshops, we were asked to explain why the midwives should undertake the research '*for nothing*'. When the allocation of money to their hospital for their time was outlined, the midwives responded that they would not benefit from this funding. These suspicions were justified. In one area the directorate absorbed the funds without making the monies available, as intended, to purchase extra midwifery hours, and tried to hide this action from the researchers and commissioners. Moreover, local lead researchers C and F complained to the authors that hospital accountants were placing pressure on them to allocate the monies in ways other than on midwifery time. Indeed, had interventions by the researchers and commissioners (including contacting the chief executive of one hospital) not occurred, no money would have been allocated to the midwifery service. This intervention followed the events of these field notes.

Meeting at [venue] with representative of [each of] eleven midwifery teams. I started by thanking the midwives for their hard work in contributing to the EQUANS projects, and said that the Trust had agreed we could have an extension of three months to collect data we had missed in the first six months. Immediately one midwife began tutting and shaking her head. When I moved on to say that (at the request of many midwives in the field) I had asked the NHS Screening Committee for permission to use their money to offer a small reward to the best recruiting midwife in each of the four study areas, this midwife became visibly near to tears of anger. She interrupted to complain that she and a colleague had recruited extensively to EQUANS. She complained bitterly that all midwives should be rewarded for taking part, not just those (seven or eight?) whom the Trust had decided to reward (a decision of the Trust and not of the EQUANS project) by taking out for a meal because they were "star recruiters". The midwife complained specifically that she knew of one midwife, who had been rewarded by being invited to this meal, but who had used her

student midwife to collect her EQUANS data and that she had therefore had an unfair advantage because she did not have a student midwife assigned to her. Others then complained that there were some who worked part-time and could therefore not recruit as many and that rewards should be as a proportion of caseload not in terms of absolute numbers. Still others said that some had bigger caseloads than others and therefore opportunities to recruit were different. The midwife who spoke first did temper her remarks by apologising that I should not have to be the recipient of their anger. The community midwifery manager [...] pointed out that EQUANS was paying for the location of the team meetings at pleasant locations with lunch. One midwife said that her team had not known that, and hadn't realised they were getting anything for their participation. [Field notes, 20 March, 2003]

The hired hand response we received in this area was not unprofessional behaviour but an understandable reaction to the way the way health professionals perceived they were being treated.

Comparable forms of resistance to the research were in evidence across all areas. Some midwives referred to their lack of attendance at a workshop as a reason not to collect data, even though 57 workshops were held. One antenatal clinic refused to accept a consignment of questionnaires, though had they been participating they would have exhausted their stock of questionnaires. One team of midwives claimed to the local researchers that no booking-in clinics were being undertaken when subsequent evidence suggested there were, and moreover that these were pre-planned bookings and not unanticipated bookings. Offers on the part of the local lead researchers A and D to manually insert copies of the research envelopes into each of the stock of maternity notes so that the midwife would not have to remember to pick up a research questionnaire were declined. So too were offers on the part of local researcher B to go out with the community midwife and support her in her first attempts at data collection. Such midwives stated that they could manage the research perfectly well, but little data was subsequently received from that team (cf Heaven 2010).

Reflecting on Hired Hands

To the extent that the hired hand phenomenon has been used to dismiss *all* research based on such

data, it has contributed to the methodological divide between quantitative and qualitative research (Seale 2004). However, the situation could be construed as a variation on what Hindess (1974) identified as the limits of the interpretivist critique of positivism, namely that in demonstrating variability in meaning, interpretivists do not then attempt to characterise the extent of variability, nor consider the practical import of any such variability. One might equally well say that in demonstrating hired hand mentality, Roth did not attempt to assess the extent, direction and practical consequences of such behaviour, being content merely to problematize large scale data collection. Thus neither possible reaction to the hired hand phenomenon - either to ignore the effect or to dismiss all results based on such work as flawed - constitute an adequate response. With this in mind, we attempt to assess the patterns in the extent to which, and the manner in which, midwives responded to being positioned as hired hands, and to gauge the probable effects on the data.

In our report to the commissioners we characterised the practical consequences for the quality of data collected. For example, we assessed the *internal validity* of data, reporting on differences between recorded and observed timing of how long a screening question took to administer, and used contextual data to suggest which answers were plausible to take as the basis for policy decisions. We also explicitly considered the effects of the hired hands phenomenon on the *external validity* of the data. Overall, midwives favoured recruitment of women for whom they presumed the issue was more relevant. In one area minority ethnic recruitment to the study was 16.1% compared to ethnic minority representation in the ante-natal population of 3.4%, with midwives ostensibly only inviting 1 in every 5 eligible “White British” women into the study. We noted that 13 of 115 observations of midwife-mother encounters midwives did not follow recommended practice in permitting the mother to self-assign ethnicity, and that this threat to the *reliability* of data was caused by time pressures, lack of knowledge of sickle cell/thalassaemia, and discomfort in discussing ethnicity as an issue.

Anticipating hired hands

Being cognisant of the extreme occupational pressures facing midwifery (Curtis *et al.* 2002) and the tendency of midwives to internalize high levels of guilt when overloaded (Kirkham 1999) we realized the imposition onto midwives represented by the research design, and made concerted efforts to minimise the hired hand phenomenon. We feel we successfully created the team of six local lead researchers. In addition to formal payment, the local lead researchers provided hundreds of free hours of research labour to the project; pursued issues where data did not make sense to reconcile the conundrum; pursued issues to ensure the safety of the mother (for example checking when test results contradicted medical notes), and used their creativity to solve data-collection problems on the ground. In other words, by according the local lead researchers what Sayer (2005) calls appropriate recognition, we enabled a team of midwives and nurses to flourish. We assert this because we wish to claim that we knew what the hired hand phenomenon was, and to demonstrate that we were capable of addressing it appropriately. The question is why we failed to reproduce this success with the wider group of 298 midwives.

An extensive range of initiatives were attempted to minimise the 'hired hand' effect. These might be categorised as (1) identifying the professional midwifery “stake” in the research; (2) efforts to ensure that the full financial recompense to the service for midwifery time was in turn reflected in use of the monies to ease the workload of midwives; (3) attempts to ensure good understanding and communication; and (4) endeavours to incorporate symbolic forms of acknowledgement.

Professional Stake

The research was preceded by a four hour workshop for a pilot team of ten midwives, and a one month

pilot study of the RCT which identified challenges (the midwife's part of the questionnaire was reduced to one-third of its original length, for example). The preparatory workshops for the full RCT were subsequently, at the insistence of midwifery managers, reduced to two hours. As Hammersley (1995) suggests, the power of researchers is greatly exaggerated and researchers are often in the role of supplicant. This curtailed the time for discussion with midwives during orientation workshops. Nevertheless, there was some shared problem-solving accomplished. For example, there was some success in helping midwives identify their professional stake in the research: health economics assumptions (Zeuner *et al.* 1999: 96) presumed time costs of ethnic ascertainment to be zero or negligible, ignoring the considerable emotional labour required to undertake the "dirty work" (see Author 2007) of assigning people to a possible genetic status associated with racialized identities. As expected there *were* considerable time costs ("This woman read the explanation [participant information sheet, translated into eleven languages] in Somali. Did not understand ethnicity. Explained simply three times. Still answered incorrectly. I give up. Her English was good" Midwife Comments, Questionnaire #7,939). It was arguably in the professional interests of midwives to record actual times in the face of assumptions of academic economists.

Roth (1966) himself maintained that training is insufficient to inculcate a stake in the research, though orientation workshops at least ensured midwives were "provided with the opportunity to understand the final goals of the research" (Staggenborg 1988: 265), explaining what was at stake, namely the type of screening for sickle cell that the midwives might be undertaking as part of their professional role in the future. The workshops also invited what Staggenborg (1988) regarded as a crucial modifier of the hired hands phenomenon, namely creativity on the part of the midwives, asking them to help the mother towards an understanding of the reasons behind asking an ethnic/family origins screening question (not for ethnic monitoring but for the specific reason of assessing risk of carrying genes

associated with sickle cell). Around 9% of questionnaires contained comments from the midwives, some providing insightful contextual comments pertinent to interpreting the data ("Although the client is of Afro-Caribbean origin, she originally replied no to the questions as she felt she was born in England. I had to explain further the question which then elicited the current reply" Midwife Comments, Questionnaire #12,732). In summary, we sought to problem-solve with the midwives, to identify for them questionable assumptions about factors affecting their work being made by policy makers, and put forward an argument that the screening question required professional midwifery adeptness in achieving rapport with the mother and communications skills to ensure she understood the reason underlying the questions.

Money

Part of the orientation workshops explained the funding for midwifery time that would be paid to the services, both for attendance at workshops and for time in collecting data. The time funded for midwives to collect data was 12 minutes per client, and 20 minutes per client in the one area where additional blood had to be collected. These figures were agreed on the basis of midwives' experience during a one month pilot study, and represented a level of funding of between one-fifth and one-third extra above the median booking-in time of one hour. We realised from the outset that there would be logistical difficulties in turning monies at Trusts level into support for individual midwives on the ground, as this note of an early meeting of the local read researchers indicates.

Finances (Area 1- danger of spending on overdraft; Area 2 has purchased extra midwife for antenatal clinic; Area 3 has purchased extra midwife day at antenatal clinic; Area 4 advertised but no takers even for HCA level help) [Notes: Researcher Meeting, 3-4 February, 2003]

Where replacement staff proved difficult to recruit, we suggested ways to midwifery managers that midwives might be accorded a personal stake in the research: buying equipment to make their job

easier (a community midwifery team suggested to us a set of hand scales for each individual midwife) or being invited to vote on a collective purchase. However, we were rebuffed by midwifery managers who told us it was not our business to spend the “Trust’s money”.

Communication

The main research was introduced through workshops with 262/298 of eligible midwives. These workshops covered an explanation of the policy issue that was at stake; an explanation of the thinking underlying the alternative screening questions that formed part of the RCT; an explanation of what was asked of midwives in terms of completing their section of the questionnaires (see Figure 1); an explanation of the sections to be completed by laboratory staff and by local lead researchers, and an explanation of where to send the forms, at each stage inviting comments and suggestions. The workshops also explained the funding their Trust would receive (1) for their attendance at the training; (2) for their participation in the research; and, in the case of the area where service delivery was being changed as part of the RCT design, (3) the development monies that were to underpin this change in service delivery.

Figure 1 Information Midwife was Asked to Collect

Research actions: Obtain signed consent; write questionnaire number onto blood request form; return questionnaire to local lead researcher (3 items)

Collect data (free text): Mother’s name*, hospital number*, date of birth*, gestation. Time taken to ask ethnic/family origins question. Midwife’s views on screening (6 items)

Collect data (tick box): Mother’s ethnic/family origins, mother’s preferred language, how booking was conducted if mother did not speak English, midwife’s own ethnic origin (4 items).

* Personal identifiers used to help ensure accurate linkage of questionnaire data and blood test results, but removed before the questionnaire was passed to the research team.

The orientation workshop was repeated 57 times in order to make them accessible to as many of the community midwives as possible. During the research, the midwives were sent a monthly newsletter,

tailored to each locality, which gave record of recruitment rate, any clarification requested, news information on sickle cell/thalassaemia, and a reminder of instructions and processes if local researchers reported these were not being followed. In addition, when lead researchers began to report myriad reasons that midwives gave for not participating, a newsletter in question-and answer format was circulated answering each question/objection. Five workshops on interim results were held for midwifery managers and midwifery teams. However, hopes that “alienation of hired hands can be reduced by providing ample time (and of course money) for orientation and training in a broad sense and for ongoing project meetings” (Staggenborg 1988: 265) proved unfulfilled.

Symbolic rewards

We valued the work of the midwives in non-financial ways. Each midwife was sent a letter from the Royal College of Midwives endorsing the research, and was provided with a certificate of attendance at the workshops, a stopwatch to time the administration of the screening question, and posters to record their monthly figures for recruitment (the latter two initiatives were as responses to specific requests from midwives). Finally, at the request of lead local researchers, book-tokens were introduced as incentives to recruitment. The commissioners referred this request higher within the Department of Health before approval was given.

The context of midwifery

In order to understand the events of the research process, we need to consider that midwifery is shaped by historically changing outcomes of relations to welfare systems, patriarchy, medicine, and to consumer pressures (Benoit *et al.* 2005). UK reports on maternity services the 1990s (i) treated both midwives and women as undifferentiated categories, not reflecting the variations in interests *within*

these groups; (ii) encouraged an elision of the interests of women and midwives, assuming these to be coterminous, and (iii) opposed undifferentiated women and midwives, assumed to share all interests in common, to equally undifferentiated categories of men, obstetrics and medical technologies (Annandale & Clark 1996). Each of these factors has relevance when it comes to understanding why we were unable to successfully avoid the hired hand phenomenon.

(i)

First, neither midwives nor mothers were homogenous groups. In the area where all 25 midwives self-described as White British, most midwives were observed to hurry explanations of screening to clients, in favour of creating space to attend to other professionally-defined needs and/or the expressed needs of the mother.

Midwives try to brush over the subject and get onto the next part of the booking because of their lack of haemoglobinopathy knowledge. They are embarrassed in front of the women if they do not know. Mothers are 'eager to please' the midwife and will conspire in the glossing of information for speed. [Researcher A: Researcher Meeting, 3-4 February, 2003]

In contrast, our perception was that midwives of African/Caribbean descent were more likely to engage emotionally with the research, conceiving it as “our issue”, and to write encouraging notes to the researchers in the free-text boxes on the questionnaires that invited comments (“Keep up the good work” Midwife Comments Questionnaire #12,124). This was also the case where the client already had some engagement with sickle cell issues (“This patient thought it was beneficial research as her 2 sisters have sickle cell and she has witnessed a sickle cell crisis” Midwife Comments, Questionnaire #317). Such heterogeneity underpinned the variable responses to the research. Midwives opted the woman out of the research based on their own perceptions of whether or not the research was relevant to the mother. Moreover, many White British clients were reported to assume the research was not relevant to them (“Lots of Caucasian women don’t bother reading the info sheet they receive because they think the study is only for black/Mediterranean people” Midwife Comments, Questionnaire #14,602). In such

instances the very factor the research was designed to find out (to what extent being from a minority ethnic group was sufficiently coterminous with the risk of carrying genes associated with sickle cell to permit a targeted screening programme to be effective) was *itself* used as a factor by both women and midwives to opt out of the research.

(ii)

The extent to which midwifery was under pressure at the time of the study has been well documented (Ashcroft *et al.* 2003). However, in a complex bureaucratic organization not all were *equally* busy, and contingencies of service organization meant that the pressure experienced by research involvement was variable in ways we could not predict, nor respond to quickly. Whether or not they had the help of a phlebotomist to take blood, or a student to whom some work could be devolved, whether or not they were required to cover night shifts on the labour wards between two days' work as a community midwife: all this meant there were real contingencies to workloads and real differences in experiencing a research demand. Roth does not apparently acknowledge that the hired hands phenomenon is not experienced uniformly: demands to perform their research task occur in the contexts of different working lives. There may indeed be practitioner effects in RCT interventions, especially to the extent such interventions are of a psycho-social type (Lewis *et al.* 2010) but these may also reflect contingent differences in local organizational context that enable or restrict engagement with the issue at hand, rather than only being reflections of individual practitioner enthusiasm, personality or ability.

Moreover, ante-natal clinics are gendered spaces (Dolan and Coe, 2011), and a male investigator, with sponsorship from medical policy makers that underpinned access to such spaces for research work, therefore potentially represented a symbolic insult to some midwives. A full discussion of gendered social relations is beyond the scope of this paper, but this does draw our attention to a further limitation

of Roth's original work: it fails to note that many work hierarchies, including research hierarchies (Mauthner & Edwards 2010), are gendered. It also suggests that more theoretical work on how "doing gender" at work can be undone (Kelan 2009) may be required as part of an overall programme to overcome the hired hands phenomenon.

(iii)

In resisting the research some midwives drew upon their professional ethos: midwife being "with woman", discursively constructing medicine in an oppositional manner (see Foley & Faircloth 2003). Research on screening was felt to violate such an ethos in two ways. First, screening represented the incremental medicalization of childbirth, undermining the special nature of the relationship between midwives and the pregnant woman. At some points midwives did not differentiate between women (they were all offered Down's screening). Secondly, however, at other times midwives did differentiate, making judgements about whether women were overloaded with other issues that demanded precedence. In the context of the lives of particular clients (mothers facing extreme poverty, domestic violence, racism or asylum issues) sickle cell screening was represented as an unwarranted burden on women who faced far more serious challenges in their lives.

The context of midwifery contributes to an understanding of the pathways through which a hired hand effect may be generated as a mechanism. The ethnicization of sickle cell (Wailoo 2001) provided the rationale for black midwives to embrace the research as their issue, finally getting the attention it deserved, but the same process had the effect of distancing White British midwives (and clients) from any *perceived* stake in the research. Thus, the very factor that motivated some midwives demotivated others, not least because behind a stock phrase used by midwives in the research – maintaining rapport with clients- is a recognition that discussing ethnicity and/or sickle cell, where one concept mutually

connotes the other, is emotionally toxic work (see Dyson 2007) work that they would (and did) avoid. The contingent pressures of different work configurations meant that the new demand for research was experienced as easier or more difficult to incorporate within practice: but this contingency, which required addressing to reduce the hired hand effect, was itself a contingency that commissioners required of the research design. This requirement was eminently sensible, given that efforts of single-handed practitioners in single settings are liable to be different from those achievable by multiple practitioners across multiple settings (Parker et al 2001: 49). Nor could we have devised different strategies for engaging women at low risk for carrying genes associated with sickle cell versus those at high risk: to differentiate the clients in this way would have been to presume the very factor the research sought to test. Attending to accusations that our research encouraged termination, would have required intensive one-to-one engagement with midwives to discuss the ethics of screening and in what ways screening for Down's and screening for sickle cell/thalassaemia were differently framed in their minds.

In this sense the hired hands phenomenon might be considered an inversion of the Hawthorne Effect. The Hawthorne Effect accords special recognition to selected workers, and improved performance subsequently cannot be replicated in hierarchical situations where workers are not permitted to flourish. By contrast, in a situation where, generically, workers do not feel recognised, overcoming the hired hands effect requires intensive work to engender feelings of being special, intensive work that cannot be extended indiscriminately because, by definition, not all can be special. Moreover, in the UK current National Institute for Health Research 'portfolio' arrangements for supporting research through clinical research networks promulgates another type of hired hands individual – research nurses who work on multiple studies often without deep involvement in any of them, meaning that “staff's allegiance (is) to the network rather than the individual RCT” (de Salis et al, 2008: 666).

Conclusion

Roth (1966) proffered trenchant criticisms of large scale research involving a hierarchical division of labour. He based such criticisms on plausible conceptual arguments derived from the sociology of work, illustrated by reference to several of his own experiences within research teams. In nearly fifty years, relatively little attention has been accorded to this issue.

Yet much health services research appears to be predicated on precisely this model of research relations, in which data is collected by health staff alongside their clinical roles, with the support of a research nurse/midwife reporting to the medical research director. This undermines the research in three important realms. In terms of external validity, the research population may appear to be 'scientifically' defined by use of inclusion and exclusion criteria. However, the actual recruitment relies on the undocumented variable engagement with potential participants by front-line health staff. We have referred to *Repairers*, *Refractors* and *Resisters* as three ideal types of this variable engagement. Preconceptions shape the recruitment of clients to the study, and in this study this selectivity was partly within an ethnic framing, a phenomenon we tried to quantify by a statistical comparison of the ethnic profiles of those reported to be approached for the study compared to the ethnic profile of the whole antenatal population.

In terms of internal validity, we know nothing of the unacknowledged specifics of the interaction with those who are recruited that shape the production of knowledge (midwives reported that the trust the women had in them meant that they could influence whether or not the woman "chose" to take part). The reliability of administration of the research instrument, both within and between midwives, is

equally subject to variability. We suggest that midwives can encourage or discourage completion; that other circumstances (such as a desire to see the mother take up basic antenatal care that would otherwise be denied her) can determine how the mother is engaged with the research; that the degree of congruence of the research topic (screening, sickle cell) with the ethos of the specific professional can influence the mode of participation; and that the politics of medical control of birthing, the sense of de-professionalization and of occupational stress characterising early twenty-first century British midwifery, and the local politics of finance can all crucially influence the manner of administering research.

It is clear that the range of factors attempted by the researchers to minimise the hired-hand phenomenon were of limited effect, and that this may in part be attributable to engaging with the methodological frame in isolation from the frames of gender and the practical management of clinical encounters. Nevertheless, we are compelled to question the value of health services research that fails to engage with this methodological frame, but which describe uncritically the outcomes of such research as “what this research adds to our knowledge”. The minimum response would be to endorse the call for process-orientated health services research (Oakley, 2006), or, more ambitiously, to reconfigure the RCT entirely to reflect generative notions of causality (Blackwood *et al*, 2010).

Roth himself was short on ideas of how the ‘hired hand’ effect could be counteracted, save for an assessment of size of research team, nature of their subordination and degree of adherence to rigid plans. By such indicators would the hired handedness of research be judged and its findings rejected. We suggest that hired researchers should include reflexive data in their submissions, including reflections on the degree and direction of potential impacts on validity and reliability, and an assessment of the practical consequences of such impacts on the policy issue at hand.

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